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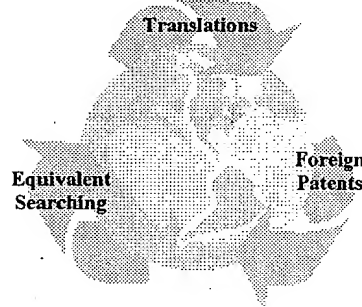
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FLAT OUTLET AND SEMIFINISHED CARTON PRODUCT
[Furatto chuushutsuguchi oyobi kaaton hanseihin]

Hitoshi Sekino, et al.

UNITED STATES PATENT AND TRADEMARK OFFICE
Washington, D.C. November 2003

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INVENTORS	(72): SEKINO, HITOSHI; UEMATSU, HIROSHI
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[Claims]

[Claim 1] A flat outlet characterized by being equipped with a brim-shaped circumferential part that is for adhering to the carton's inner surface, a prominent part that is formed in a manner such that it protrudes from the brim-shaped circumferential part in the area surrounded by the brim-shaped circumferential part and that has a flat top, a thin part for hinge formation and a thin part for opening that are formed on the flat surface of said prominent part in a manner such that they surround the part that will be an opening lid (said thin part for hinge formation is linear and said thin part for opening forms a narrow angular part at a location that opposes said thin part for hinge formation), a column that protrudes near said angular part of said part that will be the opening lid, a pull ring that is connected to the column and that is parallel to the flat surface of said prominent part, a liquid-blocking protrusion provided on the outside of said angular part in a manner such that it protrudes from the flat surface of the prominent part and such that it protrudes outward further than the side surface of said prominent part, and a carton-latching protrusion provided on the side surface of the opposite side of said liquid-blocking protrusion of said prominent part and also characterized by said prominent part protruding by 1~3mm in height from the carton surface in a condition in which the prominent part has been passed through the opening provided in the carton and in which the brim-shaped circumferential part is adhered to the carton's inner surface.

[Claim 2] A semifinished carton product that is obtained by putting paper boards together into a cylinder and by folding it flat and that

is characterized by the flat outlet of Claim 1 being attached to an area that will be the roof part of the carton.

[Detailed Explanation of the Device]

[Industrial Field of Application]

The present invention pertains to outlets utilized for paper containers (hereafter referred to as cartons) for milk, juices, etc. and semifinished carton products that are for manufacturing the cartons.

[Prior Art]

Various types of cartons are conventionally utilized and gable-top-seal-type cartons that have roof-shaped tops are widely utilized. These gable-top-seal-type cartons are divided into two types: ones without outlets and ones with outlets at the roof parts. Many of the outlets conventionally utilized consist of two pieces which are an outlet main unit and a cap that is screwed onto it. As illustrated in Fig. 9, an outlet [2] that consists of a single piece, which is provided with a brim-shaped peripheral part [2a] that is connected to the inner surface of the carton [1], a protruding part [2c] that protrudes from it and that has a flat surface [2b] at the top, a thin part [2d] for opening provided at the protruding part [2c], and a gripper [2e] for pulling, is also known (refer to, for example, Jikkai No.61-11520). According to this outlet [2], the thin part [2d] is torn by pulling the gripper [2e], and the outlet can be opened and closed by using the part surrounded by the thin part [2d] as a hinged cap [2f].

[Problems that the Device is to Solve]

However, both of the above conventional techniques have problems. In other words, the carton without an outlet is troublesome to open since it naturally requires that the adhered roof part be peeled apart.

The carton provided with an outlet is easy to open but had the following problems. In general, the manufacture of cartons and the filling of the cartons with contents are performed by different venders. In other words, a manufacturer makes semifinished carton products by pasting paper boards having prescribed shapes and prescribed fold lines into cylindrical shapes and by then flattening them, and these are then supplied to a filling vender. The filling vender then sets the obtained semifinished carton products in a filling device in multiple layers and the filling device extracts the semifinished carton products one piece at a time, opens them into rectangular shapes, assembles the bottom parts, fills them with contents, and assembles the top parts. In cases in which outlets are attached, the filling vender makes a filling device that has an outlet attaching device incorporated in it and automatically attaches the outlets, assembles the cartons, fills the contents, assembles the top parts, etc. in general. This, however, requires that a new filling device be made, and a very large equipment cost is required.

In light of this, it is conceivable to have semifinished carton products provided with outlets made by the carton manufacturer and to supply them to the filling vender. However, since all conventional outlets protrude a lot from the carton surface, the cartons are bulky and inconvenient to transport and store. Moreover, when these semifinished

carton products are set in the filling device in layers, the layered semifinished carton products expand in a fan shape due to the outlets protruding from the surfaces, and this may cause a feeding error in the filling device. Moreover, there is also a problem in that when cartons provided with outlets are fed to a conventional filling device that is for filling cartons without outlets, the outlets that largely protrude from the surfaces occasionally interfere with smooth filling.

The purpose of the present device is to solve such problems and to supply outlets that only slightly protrude from carton surfaces and semifinished carton products provided with the outlets.

[Means for Solving the Problems]

The following are the principles of present device: a flat outlet characterized by being equipped with a brim-shaped circumferential part that is for adhering to the carton's inner surface, a prominent part that is formed in a manner such that it protrudes from the brim-shaped circumferential part in the area surrounded by the brim-shaped circumferential part and that has a flat top, a thin part for hinge formation and a thin part for opening that are formed on the flat surface of said prominent part in a manner such that they surround the part that will be an opening lid (said thin part for hinge formation is linear and said thin part for opening forms a narrow angular part at a location at which it opposes said thin part for hinge formation), a column that protrudes near said angular part of said part that will be the opening lid, a pull ring that is connected to the column and that is parallel to the flat surface of said prominent part, a liquid-blocking protrusion

provided on the outside of said angular part in a manner such that it protrudes from the flat surface of the prominent part and such that it protrudes outward further than the side surface of said prominent part, and a carton-latching protrusion provided on the side surface of the opposite side of said liquid-blocking protrusion of said prominent part and characterized by said prominent part protruding by 1~3mm in height from the carton surface in a condition in which the prominent part has been passed through the opening provided in the carton and in which the brim-shaped circumferential part is adhered to the carton's inner surface; and a semifinished carton product that is obtained by putting paper boards together into a cylinder and by folding it flat and that is characterized by the above-mentioned flat outlet being attached to an area that will be the roof part of the carton.

[Operation of the Invention]

According to the flat outlet having the above structure, its overall height is very low since the height of the prominent part that protrudes from the carton surface is about 1~3mm and low and also since the pull-ring for opening is provided in parallel to the flat surface of the prominent part. Therefore, a semifinished product having this flat outlet attached to it is not bulky and can be conveniently transported. Moreover, it can be set in an existing filling device and can thus be filled without a problem.

In order to attach the flat outlet to a carton, the prominent part is inserted into an opening made in the paper board that structures the carton and the brim-shaped circumferential part is adhered to the rear

surface of the paper board by means of ultrasonic sealing, etc. During this time, the prominent part is inserted into the opening of the paper board and is then transferred to the sealing location. At this time, the carton-latching protrusion and the liquid-blocking protrusion of the prominent part become caught on the surface side of the paper board and prevent the outlet from coming off. This simplifies and ensures the attachment of the outlet.

When opening the carton equipped with the above flat outlet, the thin part for opening is torn off by the pull-ring being pulled, the opening lid that is surrounded by it rotates with the thin part for hinging as the supporting point, and a pouring hole is thus formed. When the contents are poured from the pouring hole, the contents are poured from the angular part of the pouring hole, and since there is a liquid-blocking protrusion below it, the poured liquid flows beyond the liquid-blocking protrusion and will not wet the carton's outer surface. Moreover, even if part of the liquid flows to the side of the liquid-blocking protrusion, it will not wet the carton's outer surface since the prominent part that forms the pouring hole protrudes from the carton's outer surface.

[Working Example]

A working example of the present device illustrated in drawings will be explained below.

Figure 1 is a schematic flat view of the flat outlet of the working example of the present device, and Figs. 2 and 3 are drawings that show the cross-sectional views of the II-II line and III-III line of Fig. 1 in magnification. This flat outlet [5] consists of a single piece that

is obtained by subjecting a plastic, such as polyethylene, polypropylene, etc., to injection molding, and it has a brim-shaped circumferential part [7] that is for adhering to the inner surface of the paper board [6] that makes up the carton, a prominent part [8] that is made to protrude from the brim-shaped circumferential part in the area surrounded by the brim-shaped circumferential part and that has a flat top, and a hinge-forming thin part [10] and a thin part [11] for opening that are provided to the flat surface of said prominent part in a manner such that they surround the part (hereafter simply referred to as the opening lid) [9] that will be the opening lid. The prominent part [8] roughly has the shape of a home base, and the thin parts, [10] and [11], also roughly have the shape of a home base. In other words, the hinge-forming thin part [10] is linear, and the thin part [11] for opening forms a narrow angular part [11a] at a location that opposes the hinge-forming thin part [10]. This angular part [11a] is, as illustrated in Fig. 8, for providing a pouring hole [20], which is formed by opening the opening lid [9], with a part that restricts the flow path of the contents. Moreover, it is preferred that this angular part [11a] be curved at a small curvature, as illustrated in Fig. 8. The thin part [11] for opening is formed thinly so that it can be easily pulled and opened, but the hinge-forming part [10] is formed thicker than the thin part [11] for opening so that it will not be torn off.

The prominent part [8] is tall enough to protrude from the carton surface in a condition in which the prominent part is passed through the opening created in the carton and in which the brim-shaped circumferential

part [7] is adhered to the carton's inner surface, and the height [h] (see Fig. 3) of the protrusion of said prominent part from the carton surface is made to be 1~3mm. This height [h] is set to be the above value by taking into consideration the fact that a greater height is desirable for preventing the contents from wetting the carton's outer surface when pouring and the fact that the height should be as low as possible for the semifinished carton products equipped with the outlets [5] to be transported and to be set in the filling device.

The outlet [5] further has a column [13] that protrudes near said angular part [11a] of the opening lid [9] and a pull ring [14] that is connected to the column and that is provided in parallel to the prominent part. The height of the column [13] is set to be as low as possible within a range in which the pull ring [14] can be grasped with a finger and it should be, for example, about 1~1.5mm. Moreover, thin reinforcing columns [15] are formed on both sides of the pull ring [14]. These have the role of supporting the pull ring [1] and also ensure the flow of the resin at the time of injection molding. At the end of the pull ring [1] on the column [14] side, there is a protrusion part [14a] that protrudes in the direction of the cylinder. This protrusion part [14a] has the role of a stopper that prevents the opening lid [9], which has been opened, from entering the prominent part [8] too far when it is closed back up.

On the outside of the angular part [11a], there is a liquid-blocking protrusion [16] that protrudes from the flat surface of the prominent part. This liquid-blocking protrusion [16] is provided so that the liquid flowing from the angular part [11a] will go beyond it and not wet the

carton's outer surface. Its height is set to be the same as or slightly lower than the height of the pull ring [14]. Below the front end of the liquid-blocking protrusion [16], there is a flat surface [16a] that stops the liquid flow well at the front end of the liquid-blocking protrusion [16]. This flat surface [16a] is formed in a manner such that it protrudes further outward than the side surface of said prominent part [8]. Moreover, the side surface of the prominent part on the opposite side of the liquid-blocking protrusion [16] is provided with a carton-latching protrusion [17]. This carton-latching protrusion [17] is formed at a location that allows it to be above the paper board [6] when said prominent part [8] is passed through the opening of the paper board [6] that makes up the carton.

It is preferred that the entire outlet [5] or the opening lid [9] have a rough surface in order to make its light transmittance low.

Figures 4 and 5 illustrate a semifinished carton product [21] obtained by putting together a paper board [6], which has a prescribed shape and fold lines at prescribed locations, into a cylindrical shape and by then folding it flat.

This semifinished carton product [21] has the flat outlet [5] with the above structure at a location that will be the roof part of the carton. This outlet [5] is positioned so that the liquid-blocking protrusion [16] is at the bottom, and it is attached by allowing the prominent part [8] to protrude from the surface side of the paper board [6] and by adhering the brim-shaped circumferential part [7] to the inner surface of the paper board [6]. It is preferred that ultrasonic sealing be utilized for this

adhesion.

In order to attach the outlet [5] to a semifinished carton product [21] by means of ultrasonic sealing, the following should be performed. The prominent part [8] of the outlet [5] should be inserted into the opening provided in the paper board [6] as illustrated in Figs. 2 and 3. Next, this carton [6] is sent to the ultrasonic sealing position, the bottom surface of the outlet [5] is supported by means of an anvil, and an ultrasonic horn is pressed against the location that corresponds to the brim-shaped circumferential part [7] from the surface side of the paper board. After inserting the prominent part [8] of the outlet [5] into the opening of the paper board [6], it is necessary to transfer the paper board [6] to the ultrasonic sealing position. If the outlet [5] is about to fall off of the paper board [6] at this time, the carton-latching protrusion [17] of the prominent part [8] or the flat surface [16a] of the liquid-blocking protrusion [16] catches the surface of the paper board [6] and prevents the outlet from coming off of the paper board. This ensures the attachment of the outlet [5] to the paper board [6].

The attaching of the outlet [5] to the semifinished carton product [21] may be carried out before the paper board [6] that makes up the semifinished carton product [21] is folded or after it has been put together in a cylindrical shape illustrated in Fig. 4. The attachment of the outlet [5] is very easy to accomplish when the outlet [5] is attached to the paper board [6] before the paper board [6] is folded.

Many of the semifinished carton products [21] illustrated in Figs. 4 and 5 are collected and supplied to a vender who will fill them with

contents. The filling vender sets these semifinished carton products in a filling device, pulls them out one by one in the same manner as in the past, assembles the bottom parts, fills them with contents, and assembles the top parts. Thus, a carton [22] that has the outlet [5] attached to the roof part is completed as illustrated in Fig. 6.

In order to open the outlet [5], the pull ring is grasped and pulled up with a finger. By this, the opening lid [9] is opened as illustrated in Figs. 7 and 8, and a pouring hole [20] is thus created. Moreover, the dimensions of the opening lid [9], the attachment position of the outlet [5], etc. are set so that, when the opening lid [9] is opened by being turned with the hinge-forming thin part [10] as the center, the pull ring [14] can be hooked onto the carton's top part [6a]. This prevents the opening lid [9] that has been opened from returning to the original position and closing the pouring hole [20].

When the contents are poured out, they are made to flow from the angular part [11a] at the lower end of the outlet [20]. Since there is a liquid-blocking protrusion [16] below this angular part [11a], the poured contents flow out beyond the liquid-blocking protrusion [16], and therefore, the carton's outside surface does not become wet. Moreover, even if some of the contents leaked from the sides of the liquid-blocking protrusion [16], the carton's surface hardly becomes wet since the prominent part [8] protrudes from the carton's surface. In this manner, unsanitary conditions caused by the contents attaching to the carton's surface can be avoided.

After the pouring of the contents is finished, the pull ring [14] that was hooked onto the carton's top part [6a] is unhooked, and the opening lid [9] is returned to the original position. This re-closes the pouring hole [20].

[Effects of the Device]

As explained earlier, the flat outlet of the present invention is made of a single part consisting of a synthetic resin, etc. Therefore, its cost is lower than that of a conventional outlet, which consists of an outlet main unit and a cap. Moreover, when compared to the conventional single-piece outlet illustrated in Fig. 9, its entire body is flatter and fewer materials are used for it. Therefore, the cost can be reduced even more. Furthermore, since the entire body is flat, it protrudes from the carton's surface only in a small area, and therefore, it can be utilized in a conventional filling device that is for cartons without outlets. Moreover, since the overall body of the semifinished carton product that has this flat outlet attached to it is flat, it does not become very bulky even when many of them are layered. Therefore, transportation and storing are easy to accomplish, and many of them can be set in a filling device in layers. Moreover, even though it has a flat structure, it is very sanitary since the contents hardly wet the carton's outer surface when the contents are poured out.

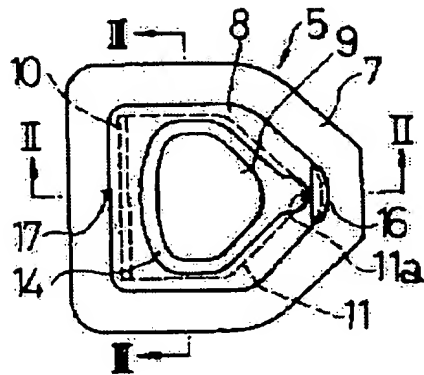
[Brief Explanation of the Drawings]

Figure 1 is a plane view of the outlet of one working example of the present device, Figure 2 is a magnified cross-sectional drawing of the II-II line of Fig. 1, Figure 3 is a magnified cross-sectional drawing

of the III-III line of the Fig. 1, Figure 4 is a schematic plan view of a semifinished carton product that has the above outlet attached to it, Figure 5 is its side view, Figure 6 is the cross-sectional view of the essential part of a carton that has the above outlet attached to it, Figure 7 is a cross-sectional view of the essential part that shows a condition in which the outlet is opened, Figure 8 is a front view that shows a condition in which the outlet is opened, and Figure 9 is a cross-sectional drawing showing the essential parts of the carton equipped with a conventional single-piece-type outlet.

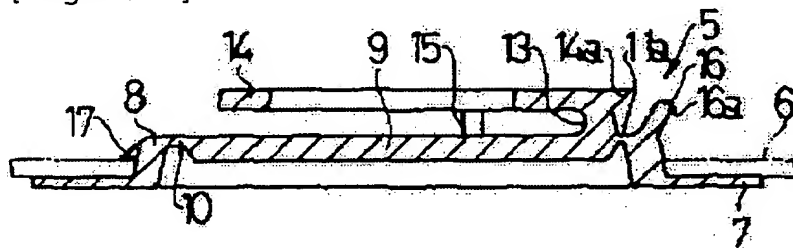
[5] = outlet; [6] = paper board; [7] = brim-shaped circumferential part; [8] = prominent part; [9] = opening lid; [10] = hinge-forming thin part; [11] = thin part for opening; [11a] = angular part; [13] = column; [14] = pull ring; [16] = liquid-blocking protrusion; [17] = carton-latching protrusion; [20] = pouring hole; [21] = semifinished carton product; [22] = carton.

[Figure 1]

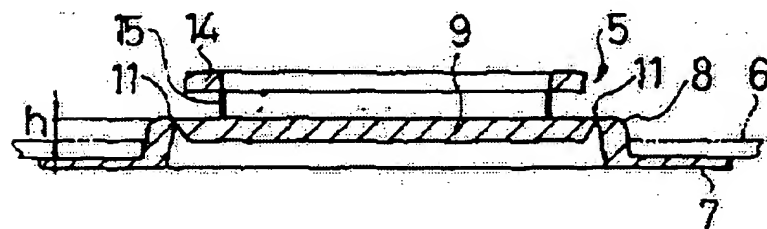


- [5] = outlet
- [6] = paper board
- [7] = brim-shaped circumferential part
- [8] = prominent part
- [9] = opening lid
- [10] = hinge-forming thin part
- [11] = thin part for opening
- [13] = column
- [14] = pull ring
- [16] = liquid-blocking protrusion
- [17] = carton-latching protrusion

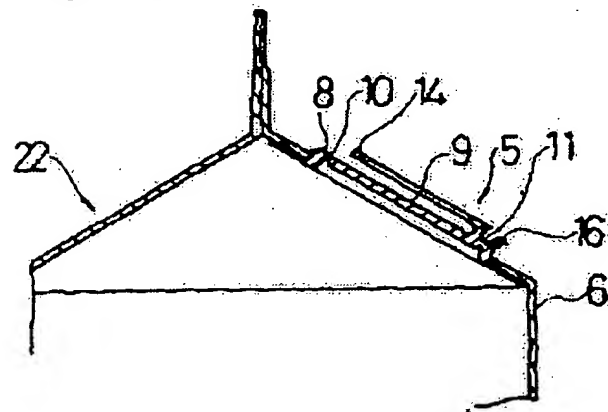
[Figure 2]



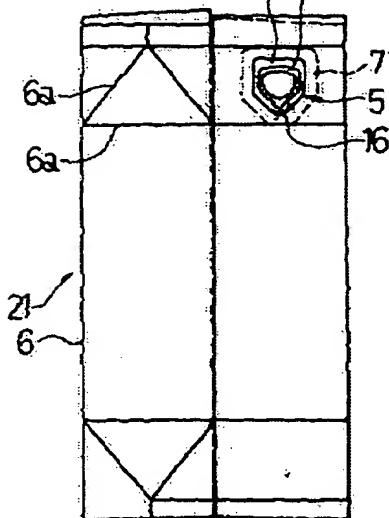
[Figure 3]



[Figure 6]



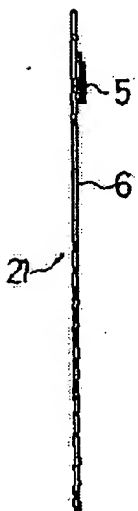
[Figure 4] 8 14



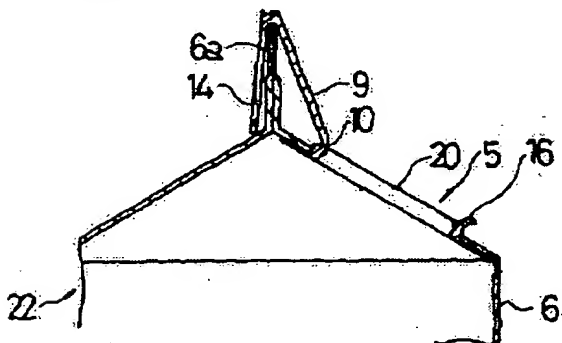
[Figure 5]

5-注出口
6-紙板
21-カートン半製品

[5] = outlet
[6] = paper board
[21] = semifinished carton product

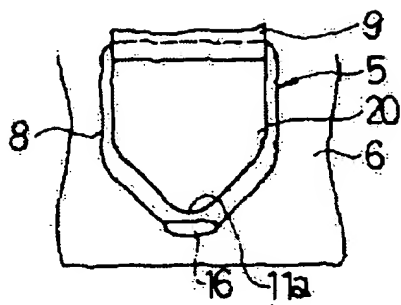


[Figure 7]

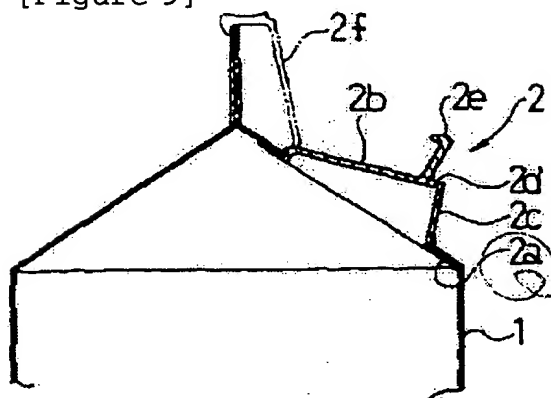


[5] = outlet
[6] = paper board
[9] = opening lid
[16] = liquid-blocking protrusion
[20] = pouring hole
[22] = carton

[Figure 8]



[Figure 9]



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(56) 参考文献 特開 昭64-9152 (J P, A)

実開 昭63-197827 (J P, U)

実開 昭63-107922 (J P, U)

(54) 【考案の名称】 フラット注出口及びカートン半製品

1

【実用新案登録請求の範囲】

【請求項1】 カートンの内面に接着するための罫状周縁部と、その罫状周縁部に囲まれた部分に罫状周縁部より突出するように形成され、頂部を平坦とした隆起部と、該隆起部の平坦面に開封蓋となる部分を取り囲むように形成されたヒンジ形成用溝内部及び開封用溝内部であって、前記ヒンジ形成用溝内部は直線状であり、前記開封用溝内部は前記ヒンジ形成用溝内部に対向する位置に挟まった角部を形成している前記ヒンジ形成用溝内部及び開封用溝内部と、前記開封蓋となる部分の前記角部近傍に突出した支柱と、その支柱につながり、前記隆起部の平坦面に平行に形成されたブルリングと、前記角部の外側に隆起部の平坦面から突出するように且つ前記隆起部の側面よりも外側に突出するように形成された液切れ突起と、前記隆起部の前記液切れ突起とは反対側の側面に

2

形成されたカートン係止用突起とを備え、前記隆起部は、その隆起部をカートンに形成した開口に通し罫状周縁部をカートン内面に接着した状態において、カートン表面から突出する高さを有し、該隆起部のカートン表面からの突出高さを1～3mmとしたことを特徴とするフラット注出口。

【請求項2】 紙を筒状に貼り合わせ、かつ扁平に折り、畳んだカートン半製品において、カートンの屋根部となる位置に、請求項1に記載のフラット注出口を取付けていることを特徴とするカートン半製品。

【考案の詳細な説明】

【産業上の利用分野】

本考案は、牛乳、ジュース等の紙容器（以下カートンという）に使用する注出口及びそのカートンを製造するためのカートン半製品に関する。

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〔従来の技術〕

従来各種のカートンが使用されており、頂部を屋根状としたゲーベルトップシール形カートンも広く使用されている。このゲーベルトップシール形カートンには、注出口を全く設けていないものと、屋根部に注出口を設けているものの2種類がある。従来使用されている注出口としては、カートンに固定する注出口本体とそれに接合するキャップとの2ピースからなるものが多い。また、第9図に示すように、カートン1の内面に接合する鐫状周縁部2aとそれから隆起し頂部に平坦面2bを有する隆起部2cと、その隆起部2cに形成した開封用の薄肉部2dと、引っ張り用溝み2eとを設けた1ピースからなる注出口2も知られている（例えば、実開昭61-11529号公報参照）。この注出口2では溝み2eを引っ張ることにより、薄肉部2dを引き裂き、その薄肉部2dで囲まれた部分をヒンジ蓋2fとし、注出口の開封及び再閉鎖を行うことができるものである。

〔考察が解決しようとする課題〕

しかしながら、上記の従来技術にはいずれも問題点があった。すなわち、注出口を設けていないカートンでは、当然開封に当たって屋根部の貼着部を剥離させるという動作を必要とし、開封が面倒である。

注出口を設けたカートンは、開封は容易となるが、次のような問題が生じた。一般にカートンは製造業者と、内容物の充填業者が異なっている。すなわち、製造業者は、所定の形状の且つ所定の折り目線を付けた板紙を筒貼りして扁平な形状としたカートン半製品を作り、これを充填業者に供給する。一方、充填業者は入手したカートン半製品を多数重ねた状態で充填装置にセットし、その充填装置で、カートン半製品を1個ずつ取り出し、矩形状に開き、底部を組み立て、内容物を充填し、頂部を組み立てている。ここで、注出口を取付けるには、一般に充填業者側において、注出口の取付装置を組み込んだ充填装置を作り、その充填装置で注出口取付、カートン組み立て、充填、頂部組み立て等を自動的に行っている。ところが、このためには新たな充填装置を製作する必要があり、極めて多大な設備費を必要とする。

そこで、カートン製造業者の方でカートン半製品に注出口を取付けたものを作成し、充填業者に供給することが考えられる。ところが、従来の注出口はいずれもカートン表面からの突出量が大きいため、嵩張り、輸送、保管に極めて不便である。しかもこのカートン半製品を重ねて充填装置にセットする際、表面から突出した注出口のために、重ねたカートン半製品が扇状にひろがり、充填装置への供給不良を生じる恐れがある。また、従来の注出口のないカートン充填用の充填装置に、注出口を付けたカートンを供給すると、表面から大きく突出した注出口が邪魔になることがあり、良好な充填ができないという問題もあった。

本考察はかかる問題点を解消せんとするもので、カート

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ン表面から突出量の小さい注出口及びその注出口を取付けたカートン半製品を提供することを目的とする。

〔課題を解決するための手段〕

本考察は、カートンの内面に接着するための鐫状周縁部と、その鐫状周縁部で囲まれた部分に鐫状周縁部より突出するように形成され、頂部を平坦とした隆起部と、該隆起部の平坦面に開封蓋となる部分を取り囲むように形成されたヒンジ形成用薄肉部及び開封用薄肉部であって、前記ヒンジ形成用薄肉部は直線状であり、前記開封用薄肉部は前記ヒンジ形成用薄肉部に対向する位置に挟まれた角部を形成している前記ヒンジ形成用薄肉部及び開封用薄肉部と、前記開封蓋となる部分の前記角部近傍に突出した支柱と、その支柱につながり、前記隆起部の平坦面に平行に形成されたブルリングと、前記角部の外側に隆起部の平坦面から突出するように且つ前記隆起部の側面よりも外側に突出するように形成された液切れ突起と、前記隆起部の前記液切れ突起とは反対側の側面に形成されたカートン係止用突起とを備え、前記隆起部は、その隆起部をカートンに形成した開口に通し鐫状周縁部をカートン内面に接着した状態において、カートン表面から突出する高さを有し、該隆起部のカートン表面からの突出高さを1～3mmとしたことを特徴とするフラット注出口、及び、板紙を筒状に貼り合わせ、かつ扁平に折り畳んだカートン半製品において、カートンの屋根部となる位置に、上記したフラット注出口を取付けていることを特徴とするカートン半製品を要旨とする。

〔作用〕

上記構成のフラット注出口は、カートン表面に突出する隆起部の高さが1～3mm程度と低く、しかも、開封用のブルリングを隆起部の平坦面に平行に配置したので、全体の高さが極めて低くなっており、このフラット注出口を取付けたカートン半製品は嵩張らず、輸送に便利である。また、既設の充填装置に支障なくセットして充填を行うことができる。

フラット注出口をカートンに取付けるには、カートンを構成する板紙に形成した開口に隆起部を挿入し、鐫状周縁部を板紙裏面に超音波シール等により接着する。その際、隆起部を板紙の開口に挿入した後、シール位置まで搬送するが、その時、隆起部のカートン係止用突起と液切れ突起とが板紙の表面側に引っ掛かり、注出口が抜け落ちるのを防止する。これによって注出口の取付が容易、確実となる。

上記したフラット注出口を備えたカートンを開封する時には、ブルリングを引っ張ることにより、開封用薄肉部が破断し、それに囲まれた開封蓋がヒンジ用薄肉部を支点として回転し、注出口が形成される。この注出口から内容物を注出する際、内容物は注出口の角部から注出されるが、その下に液切れ突起が形成されているので、注出された液がその液切れ突起を越えて流出し、カートン外面を濡らすことがない。また、一部の液が液切れ突起

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の情に濡れても、注出孔を形成する隆起部はカートン外面よりも突出しているため、カートン外面を濡らすことがない。

【実施例】

以下、図面に示す本考案の実施例を説明する。

第1図は本考案の実施例によるフラット注出口の概略平面図、第2図、第3図は第1図のII-II矢視断面、III-III矢視断面を拡大して示す図である。このフラット注出口5はポリエチレン、ポリプロピレン等のプラスチックで射出成形された1ピースのものであり、カートンを構成する板紙6の内面に接着するための鍔状周縁部7と、その鍔状周縁部で囲まれた部分に鍔状周縁部より突出するように形成され、頂部を平坦とした隆起部8と、該隆起部の平坦面に開封蓋となる部分（以下単に開封蓋という）9を取り囲むように形成されたヒンジ形成用薄肉部10及び開封用薄肉部11を有している。隆起部8は全体がほぼホームベース状をなしており、薄肉部10、11もほぼホームベース状をなしている。すなわち、ヒンジ形成用薄肉部10は直線状であり、開封用薄肉部11はヒンジ形成用薄肉部10に対向する位置に挟まれた角部11aを形成している。この角部11aは、第8図に示すように開封蓋9を開いて注出孔20を形成した時、その注出孔20に内容物の流出位置を規制する部分を形成するためのものである。なお、角部11aには図示のように小曲率の湾曲を付けておくことが望ましい。開封用薄肉部11は容易に引き裂いて開封できるよう薄く形成されているが、ヒンジ形成用薄肉部10は引き裂かれないよう、開封用薄肉部11よりも厚く形成されている。

隆起部8は、その隆起部をカートンに形成した開口に通い鍔状周縁部7をカートン内面に接着した状態において、カートン表面から突出する高さhを有し、該隆起部のカートン表面からの突出高さh（第3図参照）を1～3mmとしている。この高さhは、内容物を注出する時にカートン外面を濡らすことがないようにするには高い方が望ましく、また、注出口5を取付けたカートン半製品の輸送、充填装置へのセット等のためには極力低い方が望ましく、これらを考慮して上記の値に定めている。注出口5は更に、開封蓋9の前記角部11a近傍に突出した支柱13と、その支柱につながり、隆起部の平坦面に平行に形成されたブルリング14を有している。支柱13の高さは、ブルリング14を指でつかむことができる範囲で極力低く定められており、例えば1～1.5mm程度でよい。また、ブルリング14の両側の部分には細い銷状支柱15が形成されている。これはブルリング1を支える役目を果たすとともに、射出成形時の樹脂流れを確実にする作用も果たしている。ブルリング14の支柱13側端部には、横方向に突出した突出部14aが形成されている。この突出部14aは開封蓋9を開封した後、再開封した時に開封蓋9が隆起部8の中に入り過ぎないようにするストップの役割を果たす。

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角部11aの外側には、隆起部の平坦面から突出するように液切れ突起16が形成されている。この液切れ突起16は角部11aのところから流出する液体がこれを通り越え、カートン外面を濡らさないように設けるものである。高さとしては、ブルリング14の高さと同様またはそれより若干低く設定されている。液切れ突起16の先端下面には平坦面16aが形成されており、液切れ突起16の先端での液切れを良くしている。この平坦面16aは前記隆起部8の側面よりも外側に突出するように形成されている。また、この液切れ突起16とは反対側の隆起部側面には、カートン係止用突起17が形成されている。このカートン係止用突起17は、前記隆起部8をカートンを構成する板紙6の開口に通した時、その板紙6よりも上に出る位置に形成されている。

注出口5の全体或いは開封蓋9の表面には、表面の粗さを大きくして光透過性を小さくするようにしておくことが好ましい。

第4図、第5図は、所定形状の且つ所定位置に折り目線を有する板紙6を筒状に貼り合わせ、かつ扁平に折り畳んだカートン半製品21を示している。このカートン半製品21には、カートンの屋根部となる位置に、上記構成のフラット注出口5が取付けられている。この注出口5は、液切れ突起16が下になるように配置され、且つ隆起部8を板紙6の表面側に突出させ、鍔状周縁部7を板紙6の内面に接着することにより取付けられている。この接着には超音波シールを用いることが好ましい。

超音波シールによって注出口5をカートン半製品21に取付けるには、第2図、第3図に示すように板紙6に形成した開口に注出口5の隆起部8を挿入し、次いで、このカートン6を超音波シール位置に送り、注出口5の底面をアンビルで支持し、板紙表面側から超音波ホーンを鍔状周縁部7に対応する位置に押付けるといった動作を行えばよい。この際、注出口5の隆起部8を板紙6の開口に差し込んだ後、その板紙6を超音波シール位置に送ることが必要となるが、その際、注出口5が板紙6から脱落しようとした時、隆起部8のカートン係止用突起17或いは液切れ突起16の平坦面16aが板紙6の表面に引っ掛かり、板紙から注出口が抜けるのを防止する。これによって、注出口5の板紙6への取付が確実となる。

カートン半製品21への注出口5の取付けは、カートン半製品21を構成する板紙6が折り畳まれる前に行ってもよいし、或いは、第4図に示す形状に筒貼りをした後行ってもよい。板紙6を折り畳む前に、その板紙6に注出口5を取付けるようにすると、注出口5の取付動作が極めて容易となる。

第4図、第5図に示すカートン半製品21は、多数が準備されて、内容物の充填業者へ供給される。充填業者では、このカートン半製品を充填装置にセットし、従来と同様に1個ずつ引き出し、底部の組み立て、内容物の充填、頂部の組み立て等を行う。かくして、第6図に示す

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ように、屋根部に注出口5を取付けたカートン22が完成する。

注出口5を開封するには、ブルリング14を指で摘んで引き上げる。これにより、第7図、第8図に示すように、開封蓋9が開封され、注出孔20が形成される。なお、開封蓋9の寸法、注出口5の取付位置等は、開封蓋9をヒンジ形成用薄肉部10を中心として回転させて開いた時、ブルリング14をカートン頂部6aに引っ掛けることができるように定められている。これにより、開いた開封蓋9が元に戻って注出孔20を閉鎖することが防止される。内容物を注出する際には、内容物が注出口20の下端の角部11aから流出する。この角部11aの下には液切れ突起16が形成されているので、流出した内容物はこの液切れ突起16を越えて流れ出し、そのため、カートン外面が濡れることがない。また、多少、内容物がその液切れ突起16の両側に溢れたとしても、隆起部8がカートン表面より突出しているため、殆どカートン表面を濡らすことはない。かくして、内容物がカートン表面に付着して不衛生となることが防止される。

内容物の注出を終えた後は、カートン頂部6aに引っ掛けていたブルリング14を外し、開封蓋9を元の位置に戻せばよい。これにより、注出孔20を再閉鎖できる。

【考察の効果】

以上に説明したように本考案のフラット注出口は、合成樹脂等の1ピース部品で作られているため、従来の注出口本体とキャップとからなる注出口に比べてコストが安く、また、第9図に示す従来の1ピース注出口に比べて*

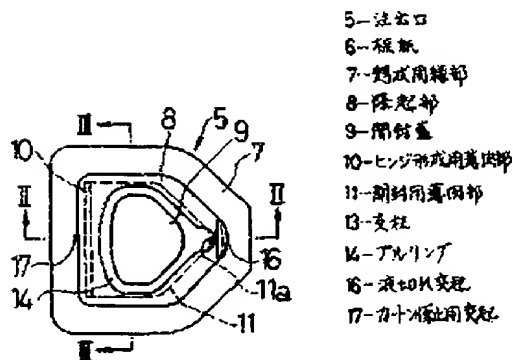
*も全体が偏平で使用材料が少ないのでコストダウンを図ることができる。また、全体を偏平としたので、カートン表面から突出する部分が少なく、従来の注出口のないカートン用の充填装置に対しても使用できる。しかも、この偏平な注出口を取付けたカートン半製品は、全体が偏平なので、多数を重ねてもあまり嵩張らず、輸送、保管が容易であり、しかも多数を重ねて充填装置にセットすることができる。また、偏平に構成しているにもかかわらず、内容物の注出時に内容物がカートン表面を濡らすことがほとんどなく、極めて衛生的である等、種々の効果を有している。

【図面の簡単な説明】

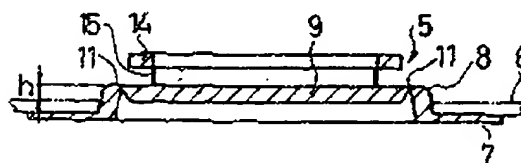
第1図は本考案の1実施例による注出口の平面図、第2図は第1図のII-II矢視拡大断面図、第3図は第1図のI-I矢視拡大断面図、第4図は上記注出口を取付けたカートン半製品の概略平面図、第5図はその側面図、第6図は上記注出口を取付けたカートンの要部の断面図、第7図はその注出口を開封した状態を示す要部の断面図、第8図は注出口を開封した状態を示す正面図、第9図は従来の1ピース形の注出口を備えたカートンの要部を示す断面図である。

5……注出口、6……板紙、7……鋸状周縁部、8……隆起部、9……開封蓋、10……ヒンジ形成用薄肉部、11……開封用薄肉部、11a……角部、13……支柱、14……ブルリング、16……液切れ突起、17……カートン係止用突起、20……注出孔、21……カートン半製品、22……カートン。

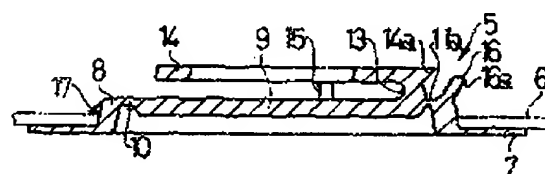
【第1図】



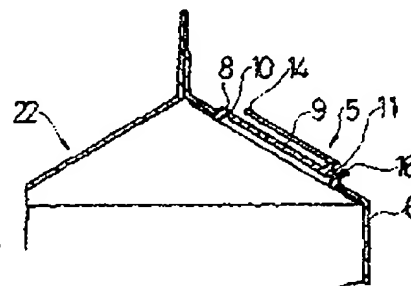
【第3図】



【第2図】



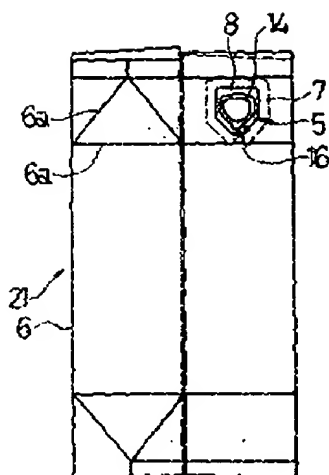
【第6図】



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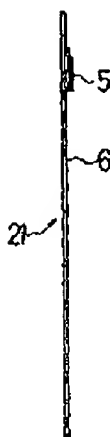
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【第4図】

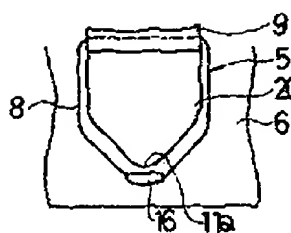


【第5図】

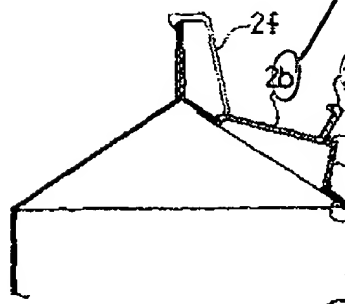
5-注出口
6-紙紙
21-カートン製品



【第8図】

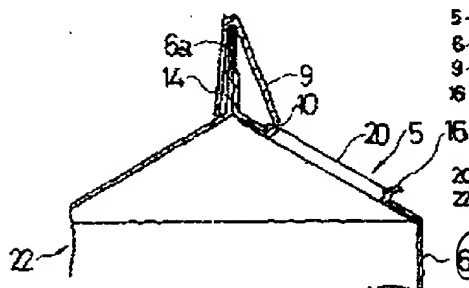


【第9図】



flat surface
knob
inlet
thin wall
primer

【第7図】



5-注出口
6-紙紙
9-開封蓋
16-裁切線突起

20-注出口
22-カートン

paper band

Utility-model/ examined publication document

1995016595

[Claims] [Detail Description] [Drawing Description]

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[CLAIM FOR THE UTILITY MODEL REGISTRATION]

[Claim 1]

Brim to bond to inner surface of carton-shaped perimeter, It seems to protrude than brim-shaped perimeter, and is formed by division surrounded with the brim-shaped perimeter, the pars tuberalis which assumed crown flatness, Thin wall part for thin wall part for above hinge formation forming the corner that the thin wall part for above opening got narrow in lay opposed to thin wall part for above hinge formation and opening, The brace which protruded said corner around division which became said opening lid, *pururingu* which is formed to train, a flat surface of said pars tuberalis in the brace by parallel, The aqua sharpness projection which is formed outward by a flat surface of pars tuberalis it seems to protrude and and it seems to protrude than flank of above pars tuberalis in the outside of said corner, Carton locking projection formed by flank of the other side is comprised with said aqua sharpness projection of said pars tuberalis, in the condition which above pars tuberalis was put through the aperture which formed the pars tuberalis in carton, and bonded collar-shaped perimeter to carton inner surface; Flat inlet; wherein; Elevation protruding from carton face is provided, lobe elevation from carton face of said pars tuberalis was done with 1-3mm.

[Claim 2]

In carton half-done goods paper board was affixed in the shape of a trunk and was folded flatly; Carton half-done goods; wherein; In lay becoming a roof part of carton, flat inlet as claimed in claim 1 is installed.

[DETAILED DESCRIPTION OF THE INVENTION]

[Industrial Application Field]

The present invention relates to milk, inlet employing in paper container of juices (referred to as carton) and carton half-done goods to produce the carton.

[Prior Art]

Various carton is employed conventionally, the *geberutoppushiru* form carton which did crown if a roof-shaped is employed broadly. When inlet is not made for this *geberutoppushiru* form carton at all, there are only two kinds establishing inlet in a roof part. There are many things comprising of two pieces with cap to engage threadedly with the main body of inlet to fix to carton for inlet employed conventionally in it. In addition, Then it protrudes with brim to join with inner surface of carton 1-shaped perimeter 2a, and, as shown in figure 9, thin wall part 2d for formed opening and inlet 2 comprising of one piece which it is pulled, and established knob 2e for is known to pars tuberalis 2c having flat surface 2b and the pars tuberalis 2c in crown (by way of example only, Japanese Utility Model Laid-Open No. 61-11520 bulletin is referred to). Thin wall part 2d is torn up with this inlet 2 by drawing out knob 2e, division surrounded with the thin wall part 2d is done with hinge cap 2f, opening of inlet extends, and it can be closed again.

[Problems to be solved by the Invention]

However, There were problems in the prior art both. In other words, Action to make naturally opening a letter is dealt with in the carton which inlet is not made for, and department to attach of roof department exfoliate is needed, opening is troublesome. Opening a letter becomes easy for the carton which inlet was made for, but, the following issue occurred. In general terms, carton is different from maker in charge vender of content. In other words, A trunk puts the paper board which touched of predetermined configuration and predetermined fold line, and maker does, and flat configuration and the carton half-done goods which did are made, this is supplied in charge vender. On the other hand, Charge vender sets in charge apparatus in the condition which repeated obtained carton half-done goods a lot, in the charge apparatus, it is taken out by carton half-done goods one, aperture, basilar part are assembled in the shape

of rectangle, content is filled, crown is assembled. The charge apparatus which incorporated load lock of inlet is made in charge vender side to the public to install inlet here, inlet mounting, carton assembling, charge, crown assembling are done in the charge apparatus automatically. However, it is had, for this reason, to produce a new charge apparatus, an extremely a great deal of cost of equipment is needed. In there, The person who installed inlet in carton half-done goods in carton maker is made, it is conceivable that it is supplied in charge vender. However, because excrescence quantity from carton face is big conventional inlet both, it is bulky, it is extremely disadvantage in carriage, custody. Besides, When this carton half-done goods is repeated, and it sets in charge apparatus, carton half-done goods repeated by reason of the inlet which protruded from face opens in the shape of a fan, it might produce feed defectiveness to charge apparatus. In addition, When the carton which touched inlet in charge apparatus for carton charge without conventional inlet is supplied, there can be the thing that the inlet which protruded greatly is disturbed in by face, there was the issue which it was not possible for good charge. The present invention is directed to that the carton half-done goods which installed small inlet of excrescence quantity and the inlet from carton face with a person assuming that problems to take are not broken off is provided.

[Means to solve the Problems]

It seems to protrude than collar-shaped perimeter, and the present invention is formed by division surrounded in brim to bond to inner surface of carton-shaped perimeter and the collar-shaped perimeter, it is thin wall part for thin wall part for hinge formation which the division that it is seems to be surrounded, and is formed to flatness and a flat surface of the pars tuberalis which did and the pars tuberalis in crown by opening cap and opening, and thin wall part for opening bie in *katon kakarishiyo* *ki that the aqua which is formed in the brace which protruded the corner around thin wall part for thin wall part for hinge formation forming the corner which got narrow in lay opposed to thin wall part for hinge formation and opening and opening cap and division and the brace in train, *pururingu* formed to a flat surface of the pars tuberalis by parallel and the outside of the corner by a flat surface of pars tuberalis it seems to protrude and and it seems to protrude than flank of the pars tuberalis in the outside is sharp, and is keinarisa with *zenkieki setsu re* *ki of projection and the pars tuberalis by *sokumen* of *hantaisoku*, and thin wall part for hinge formation yushi in *desuru *ko sa* from *katon hyomen* in *jotai* which *zenki* *kibu tsushi in *kaikuchi* which keinarishi in *katon* in *kibu of *so*, and *setsuchakushi* in *katon naimen* in *tsubajosyuenbu*, torifuke in *furatto chudekuchi* which jokishi in *okukonbu* and *ioki* of *katon* in *katon hanseihin* which it makes *tojo* *ri in *cho and *suru furatto chudekuchi*, *oyobi bi*, *itakami* in 1-3mm and *shitako* in *deko *sa* from *katon hyomen* of *gai* *kibu, and it oriri in, or *tsu henhei*, and jon, and it is *yomune* and *suru* in *cho and *suru katon hanseihin* in *teiruko*.

[Operations]

Because elevation of the pars tuberalis that flat inlet of the assembling protruded in carton face disposed around 1-3mm and *pururingu* which, besides, was for opening low in parallel to a flat surface of pars tuberalis, elevation of the whole extremely goes low, the carton half-done goods which installed this flat inlet is not bulky, it is convenience in carriage. In addition, It sets without a hindrance in charge apparatus of in operation and can be filled. Pars tuberalis is interposed in aperture formed in paper board composing carton to install flat inlet in carton, collar-shaped perimeter is bonded to paper board rear by ultrasonic sealing. On that occasion after having interposed pars tuberalis in aperture of paper board, it is transported to sealing position, but, carton locking projection and aqua of pars tuberalis are sharp, and projection prevents that a hold, inlet fall in face side of paper board then. By means of this, Easy becomes certain installation of inlet. When carton comprising the described above flat inlet is opened, thin wall part for opening breaks by drawing out *pururingu*, opening cap surrounded by it rotates thin wall part for hinge as bearing, teeming aperture is formed. When teeming does content from this teeming aperture, as for the content, teeming is considered to be from a corner of teeming aperture, but, because aqua is sharp in the bottom, and projection is formed, the aqua is sharp, and done aqua goes over projection, and teeming flows out, carton outside surface is not got wet. In addition, Even if some aqua drifts alongside of aqua sharpness projection, pars tuberalis forming teeming aperture does not get carton outside surface wet in what protrude than carton outside surface.

[Examples]

Embodiment of the present invention shown in drawing is explained as follows. It is figure schematic plan view of flat inlet by embodiment of the present invention, figure 2, figure 3 magnify II-II *yashi* cross section, III-III *yashi* cross section of figure 1 as for figure 1, and to show in. It seems to protrude than collar-shaped perimeter, and this flat inlet 5 is formed by division surrounded in and it is a thing of injection molding done one piece collar-shaped perimeter 7 to bond to inner surface of paper board 6 composing carton and the collar-shaped perimeter in plastic such as polyethylene, polypropylene, thin wall part 11 for thin wall part 10 for hinge formation which division (simply referred to as opening lid) 9 that it is seems to be surrounded, and is formed by cap opening crown to flatness and pars tuberalis 8 which did and a flat surface of the pars tuberalis and opening is comprised. The whole almost has a configuration of Ho Stauntonia hexaphylla - pars tuberalis 8, it is done, thin wall part 10,11 almost have a configuration of Ho Stauntonia hexaphylla -, too, it is done. In other words, As for thin wall part 10 for hinge formation, a straight line-shaped, thin wall part 11 for opening forms corner 11a which got narrow in lay opposed to thin wall part 10 for hinge formation. When this corner 11a opened opening lid 9 as shown in figure 8, and teeming aperture 20 was formed, it is a thing to form division regulating bleed lay of content to the teeming aperture 20. In addition, It is desirable to add bow of a short piece of music rate to corner 11a like graphic display. Is formed thinly thin wall part 11 for opening tears up easily, and to be able to open, but, thin wall part 10 for hinge formation is formed thicker than thin wall part 11 for opening so that is not torn up. Pars tuberalis 8 comprises elevation protruding from carton face in the condition which it is put through the opening which formed the pars tuberalis in carton, and bonded collar-shaped perimeter 7 to carton inner surface, from carton face of the pars tuberalis, it sticks out and is for 1-3mm in elevation h (figure 3 reference). When, this elevation h, teeming does content, the that is low for carriage of the carton half-done goods which installed high is desirable and inlet 5, buck in to charge apparatus as much as possible is desirable, and these are considered, and it is established in the value carton outside surface seems not to be got wet, and to do. Inlet 5 comprises *pururingu* 14 formed to train, a flat surface of pars tuberalis in brace 13 which protruded in the corner 11a neighborhood and the brace of opening lid 9 more by parallel. Elevation of brace 13 is established in the area which can get *pururingu* 14 in a finger low as much as possible, by way of example only, it is preferable at one or more around 1.5mm. In addition, Thin reinforcement brace 15 is formed in division on either side of *pururingu* 14. This achieves a duty to support *pururingu* 1, and action assuring resin current in injection molding is carried out. In 13 brace edge department of *pururingu* 14, projection 14a which protruded in the crosswise direction is formed. After having opened cap 9 that this projection 14a opened, when it was closed down again, opening lid 9 plays a role as the stoper which is not too containing in pars tuberalis 8. Cut aqua to protrude, and, in the outside of corner 11a, projection 16 is formed by a flat surface of pars tuberalis. As for this aqua sharpness projection 16, liquid flowing out from a *thing* and roller of corner 11a gets over this, carton outside surface seems not to be got wet, and it is established. For elevation, it is set low *NONIF than same as elevation of *pururingu* 14 or it. Flat surface 16a is formed in head underside of aqua sharpness projection 16, aqua is sharp, and aqua sharpness in head of projection 16 is made better. This flat surface 16a is formed to protrude more outward than flank of pars tuberalis 8. In addition, Carton locking projection 17 is formed in pars tuberalis flank of the other side with this aqua sharpness projection 16. When this carton locking projection 17 put pars tuberalis 8 through aperture of paper board 6 which composed carton, is formed by lay appearing on the top than the paper board 6. It is desirable for the whole of inlet 5 or face of opening lid 9 surface roughness is increased, and it is small, and to do optical transparency. Figure 4, figure 5 show of predetermined configuration and carton half-done goods 21 paper board 6 having fold line is affixed to an appointed location in the shape of a trunk and was folded flatly. To this carton half-done goods 21, flat inlet 5 of the assembling is installed in lay becoming roof region of carton. This inlet 5 makes it seems to be below, and aqua sharpness projection 16 is disposed and pars tuberalis 8 stick out of face side of paper board 6, is installed by bonding collar-shaped perimeter 7 to inner surface of paper board 6. Ultrasonic sealing is used in this adhesion, a *ki* thing is preferable. Pars tuberalis 8 of inlet 5 is interposed in aperture formed to paper board 6 as shown in figure 2, figure 3 to install inlet 5 to carton half-done

goods 21 by means of ultrasonic sealing, subsequently this carton 6 is sent to ultrasonic sealing lay, base of inlet 5 is supported in anvil, if action to press down ultrasonic horn in lay corresponding to collar-shaped perimeter 7 from paper board face side is done, it is preferable. In doing so, after having inserted pars tuberalis 8 of inlet 5 in an opening of paper board 6, it is necessary to send the paper board 6 to an ultrasonic sealing location, but, when on that occasion inlet 5 was going to fall off paper board 6, carton locking projection 17 of pars tuberalis 8 or aqua is sharp, and flat surface 16a of projection 16 prevents that inlet falls out from a hold, paper board in the surface of paper board 6. By means of this, Installation to paper board 6 of inlet 5 becomes certain. Before paper board 6 that anchoring of inlet 5 to carton half-done goods 21 composes carton half-done goods 21 is folded, after having done *o* and it might be done or and a trunk was put on configuration shown in [figure 4](#), it may be done. Before folding paper board 6, when inlet 5 is installed to the paper board 6, it becomes extremely easy working installation of inlet 5. As for [figure 4](#), carton half-done goods 21 shown in [figure 5](#), mass is integrated, and it is supplied by a charge manufacturer of content. In charge vender, this carton partially fabricated item is set in charge apparatus, a drawer, assembling of basilar part, charge of content, assembling of crown are done by one same as before. It is covered, and, as shown in [figure 6](#), carton 22 which installed inlet 5 in a roof part is completed. *pururingu* 14 is picked up in a finger, and it is raised to open inlet 5. By this, As shown in [figure 7](#), [figure 8](#), opening lid 9 is opened, teeming aperture 20 is formed. In addition, When dimension of opening lid 9, installation lay of inlet 5 turned opening lid 9 mainly on thin wall part 10 for hinge formation, and it opened, *pururingu* 14 can seem to be hung on carton crown 6a, and is established. By this, It is prevented from opened opening lid 9 is restored, and closing teeming aperture 20. When teeming does content, content flows out from corner 11a of a bottom end of inlet 20. Because aqua sharpness projection 16 is formed with this corner 11a, this aqua is sharp, and the content which flowed out goes over projection 16, and it flows out, therefore carton outside surface does not get wet. In addition, Even if content overflowed on either side of the aqua sharpness projection 16 to some extent, because pars tuberalis 8 protrudes than carton face, most carton face needs not to be got wet. It is covered, and carton face is bonded to, and it is prevented from becoming insanitary content. *pururingu* 14 hung on carton crown 6a is excluded after having finished teeming of content, if opening lid 9 is returned to lay of a dimension, it is preferable. By this, Teeming aperture 20 can be closed again.

[Effects of the Invention]

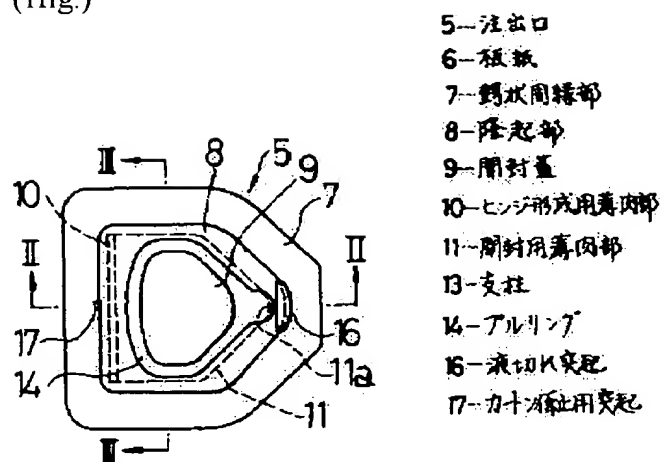
Cost is cheap and even if it is compared with the inlet that it is from conventional inlet body and cap, and flat inlet of the present invention is compared with conventional one piece inlet shown in [figure 9](#) as had explained in the above so that is made with one piece accessories of synthetic resin, because the whole is flat, and there is a little material of construction, reduction in cost can be planned. In addition, Because the whole was assumed flatness, there is a little division protruding from carton face, and it can employ for charge apparatus for carton without conventional inlet. Besides, The carton half-done goods which installed this flat inlet repeats mass in the whole being flat and is not bulky too much either, carriage, custody are easy, and, besides, mass is repeated, and it can set in charge apparatus. In addition, Though it is composed flatly, there is little that content gets carton face wet in teeming of content, and it is extremely hygienic, and various kinds of effect is comprised.

[BRIEF DESCRIPTION OF DRAWINGS]

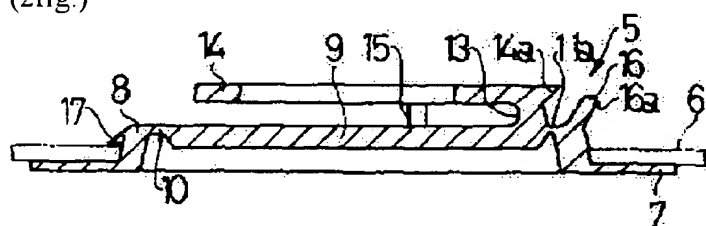
Elevation, figure 9 to show the condition that cross section of feature to show the condition which opened the inlet in, [figure 8](#) opened inlet as for cross section of feature of the carton which installed the inlet, [figure 7](#) as for the profile, figure 6 as for schematic plan view of the carton half-done goods which installed the inlet, [figure 5](#) as for III-III *yashi* expanded sectional view of [figure 1](#), [figure 4](#) as for II-II *yashi* expanded sectional view of [figure 1](#), [figure 3](#) as for alignment of inlet by one embodiment of the present invention, figure 2 as for [figure 1](#) in are cross section to show feature of carton comprising inlet of conventional one piece form in. Thin wall part ,11a corner ,13 brace ,14 *pururingu* ,16 aqua sharpness projection ,17 carton locking projection ,20 teeming aperture ,21 carton half-done goods ,22 carton for thin wall part ,11 opening for five

inlet ,6 paper board ,7 brims-shaped perimeter ,8 pars tuberalis ,9 opening lid ,10
hinge formation.

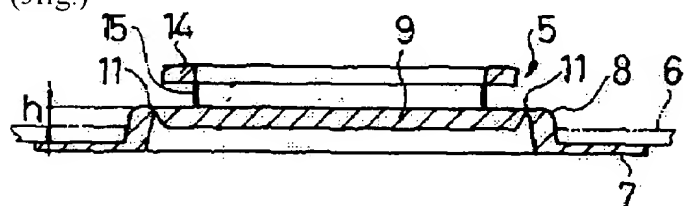
(1fig.)



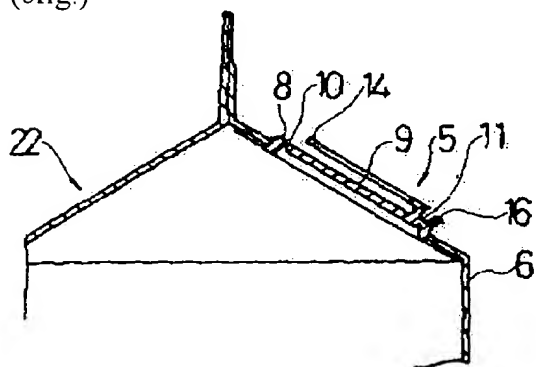
(2fig.)



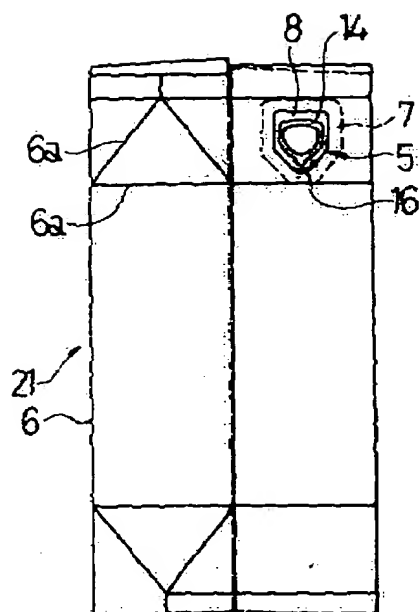
(3fig.)



(6fig.)

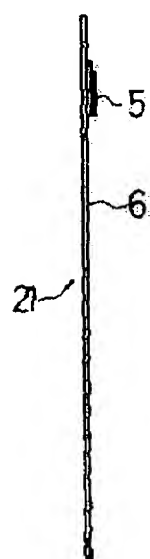


(4fig.)

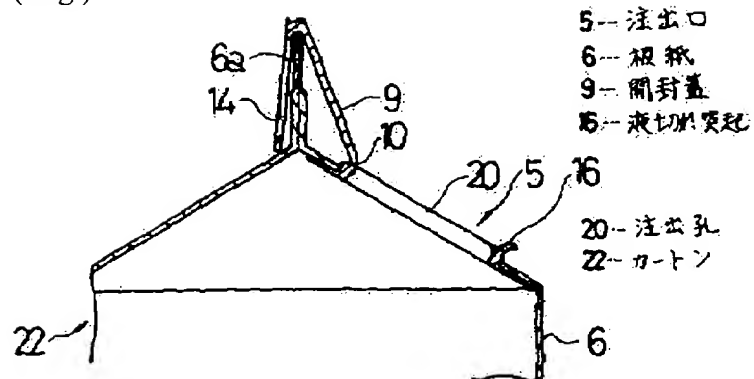


(5fig.)

5--注出口
6--板紙
21--カトン半製品

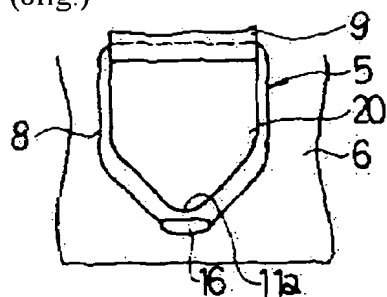


(7fig.)



5--注出口
6--板紙
9--開封蓋
10--液切開蓋
20--注出孔
22--カトン

(8fig.)



(9fig.)

